

CLAIMS

1/ A method of manufacturing a honeycomb structure, the method comprising the steps of:

5 - forming staggered cells through the entire thickness of a fiber fabric;

10 - causing pegs to penetrate into respective ones of the cells, each peg having a cross-section of size smaller than that of the corresponding cell and being made of a material that is suitable for expanding;

 - expanding the pegs so that they fill the cells (90) and exert pressure on the inside faces of the cells; and

 - shrinking the pegs and then withdrawing them.

15 2/ A method according to claim 1, wherein the pegs are mounted on a plate and extend substantially perpendicularly to said plate.

20 3/ A method according to claim 2, wherein the pegs are mounted loosely on the plate, thereby enabling them to move relative thereto.

25 4/ A method according to claim 1, wherein the pegs are expanded by heating said pegs.

5/ A method according to claim 2, wherein the pegs are expanded by heating the assembly constituted by the plate, the pegs, and the fiber fabric in an oven.

30 6/ A method according to claim 4, wherein the pegs are shrunk by natural cooling of said pegs.

7/ A method according to claim 1, wherein said material comprises silicone.

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- 8/ A method according to claim 1, wherein said material comprises metal.
- 9/ A method according to claim 8, wherein the pegs are coated with an anti-adhesive layer.
- 10/ A method according to claim 1, wherein the pegs consist of inflatable bladders each containing gas.
- 11/ A method according to claim 1, wherein the pegs consist of inflatable bladders, and the pegs are expanded by injecting gas under pressure into each of said bladders, and the pegs are shrunk by deflating said bladders.
- 12/ A method according to claim 1, further comprising, prior to the step of expanding the pegs, a step consisting in applying a backing plate against the fiber fabric, the backing plate having through holes in positions that correspond to the cells and to the pegs.
- 13/ A method according to claim 1, further comprising a step consisting in impregnating the fiber fabric with resin.
- 14/ A method according to claim 13, wherein the step of impregnating the fiber fabric with resin is implemented prior to forming the cells in the fiber fabric.
- 15/ A method according to claim 14, wherein the pegs are expanded during a step of curing the resin.
- 16/ A method according to claim 1, further comprising a step consisting in densifying the fiber fabric after the pegs have been shrunk and withdrawn.
- 17/ Tooling for implementing the method according to claim 1, the tooling comprising a plate and pegs mounted in a staggered

configuration on the plate, substantially perpendicularly thereto, and made of a material that is suitable for expanding.

5 18/ Tooling according to claim 17, wherein the pegs are mounted loosely on the plate.

19/ Tooling according to claim 17, wherein said material has a high coefficient of expansion.

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20/ Tooling according to claim 17, wherein said material possesses anti-adhesive properties.

15 21/ Tooling according to claim 17, wherein said material comprises silicone.

22/ Tooling according to claim 17, wherein said material comprises metal and each peg is coated with an anti-adhesive layer.

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23/ Tooling according to claim 17, wherein the pegs consist in inflatable bladders.